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Air Force Philosophy Shift – Fortified Airfields in Limited-Access Nations

by

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AIR FORCE PHILOSOPHY SHIFT – FORTIFIED AIRFIELDS IN LIMITED-ACCESS NATIONS

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ABSTRACT

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As President Barak Obama directed the Department of Defense to reduce defense spending by about $487 billion over the next 10 years to meet the Budget Control Act (BCA) of 2011, our strategic leaders must find ways to conduct all military operations in a more fiscally efficient manner, all while still meeting the security needs to protect US interests. Due to the new fiscally constrained environment for future military operations, it is time to explore the benefits of building a fortified air base of operations within a limited-access country vice the status quo philosophy of long-range air operations from distant, secure bases. Current United States Air Force philosophy bases Intelligence, Surveillance and Reconnaissance and aerial refueling assets at locations far from the Area of Operations due to force protection concerns. This paper explores the operational and strategic benefits of early commitment to building a fortified air base with appropriate force protection measures for flight operations to eliminate the billions of dollars in wasted transit costs, reduce fatigue on aging aircraft, decrease over-extension of aircrew, reduce opportunities for attacks on deployed forces, build partner capacity and show US resolve towards the security of the host nation.

AIR FORCE PHILOSOPHY SHIFT – FORTIFIED AIRFIELDS IN LIMITED-ACCESS NATIONS

> Modern warfare is a war for air bases; the bulldozer must accompany the plane.... One of the elements of victory in North Africa was the speed with which our aviation engineers constructed airfields behind the front lines and pressed the attack.
>
> — General Hap Arnold[1]

On January 5, 2012, President Barak Obama announced his new defense strategic guidance entitled "Sustaining U.S. Global Leadership: Priorities for 21st Century Defense."[2] This new guidance is significant because it will reshape the Department of Defense (DoD) priorities, activities, and budget requests for the next decade. The guidance steers DoD decision-makers as they must reduce defense spending by about $487 billion over the next 10 years to meet budget caps set in the Budget Control Act (BCA) of 2011. Additionally, the President's guidance lists his top 10 priority missions. One of those missions is "project power despite anti-access/area denial (A2-AD) challenges."[3] Due to this fiscally constrained environment for future military operations and the need to project power despite A2-AD challenges, it is time to explore the operational and strategic benefits of building a fortified air base (AB) within a limited-access country vice the status quo philosophy of long-range air operations from distant, secure bases.

History has shown that the US has not engaged in any theater air campaigns lasting less than three years in duration. Theater air campaigns in Vietnam, Southwest Asia, Kosovo and Afghanistan are all examples of air campaigns where the US and coalition forces engaged in long-term air operations. In all of these examples, theater air campaigns began well before and long after ground operations, so the duration is not

just limited to major combat operations. Due to the lack of defensive countermeasure equipment and the need to protect Low Density-High Demand (LD-HD) assets, standard United States Air Force (USAF) philosophy currently bases US Intelligence, Surveillance and Reconnaissance (ISR) and aerial refueling (AR) assets at locations conducive to providing the necessary force protection measures for these LD-HD assets. When US forces are faced with air operations within a limited-access country such as Afghanistan, operations are based at locations far from the Area of Operations (AO) due to force protection concerns. This concept of operations is extremely inefficient due to the long distances to and from the actual combat operations area. If the US would commit early to building a fortified AB within the limited-access nation, the long- term savings and strategic benefits would pay for the initial construction investment within two years, as will be discussed later.

Throughout this discussion, the air operations in Afghanistan will serve as the example of a limited-access nation where this philosophy shift would have proven feasible. This philosophy shift would also be feasible for any limited-access nation in Central Africa. Additionally, it is prudent to define the term “limited-access.” A “limited-access” nation is one where access to the nation is limited by geography and operations require permission from adjacent nations for transit from the international commons.

The discussion will begin by identifying the conditions that must exist before building the fortified AB. It will look at the willingness of the host nation to accept the capacity building efforts, the willingness of the host nation to share force protection requirements, ensuring the logistics capability of the host nation to fuel operations, and making certain the coalition secures complete air superiority. After setting the necessary

conditions, the discussion will shift to exploring the operational benefits in the areas of drastically cutting the billions of dollars wasted in transit costs, reducing fatigue on aging US aircraft, decreasing the over-extension of the aircrews, reducing the opportunities for attacks on deployed forces, and increasing the responsiveness for alert aircraft to eliminate the requirement for an airborne fuel reserve. Along with these operational benefits, there are multiple strategic benefits of building this fortified AB. These benefits include Building Partner Capacity (BPC) as the security responsibility will eventually transition back to the host nation; sending a strategic message to the host nation showing US resolve to support the host nation; reducing the diplomatic requirements for overflight and basing rights; and finally, eliminating the vulnerability to the A2-AD efforts of adversaries. After highlighting the conditions and benefits it is important to define the characteristics of the ideal fortified AB. Before making such a dramatic shift in basing philosophy, the discussion will begin with identifying the required conditions to build the fortified AB.

Conditions Necessary to Build

US strategic planners and host nation leadership must meet multiple conditions to ensure this philosophy shift is feasible. First and foremost, the host nation must be willing to accept the BPC efforts of the US and the presence of coalition forces. It is essential that strategic planners conduct a thorough analysis of the current or incoming host nation leadership to assess their willingness and motivations before committing to building the fortified AB. If the analysis indicates a positive relationship and willingness to accept the BPC efforts, strategic planners must then select the correct location that fits the needs of both US operations and host nation leadership.

US planners learned a valuable lesson on selecting the wrong AB location by basing US forces at Riyadh AB, Saudi Arabia in support of Operations Desert Storm and Southern Watch. The Government of Saudi Arabia (GOSA) wanted to avoid coalition personnel from influencing the Muslim population in the nation's capital. Along with the anticipated negative cultural influences, the GOSA also desired to avoid the damaging impact of the enemy targeting coalition forces stationed within the capital city. Furthermore, the Saudi Arabian military provided the force protection (FP) for coalition operations and the housing compound for coalition forces. If the enemy attacked coalition forces under the Saudi Arabian military's protection, it would reflect negatively upon the GOSA and its military. A negative strategic event already materialized in the 1996 Khobar Towers terrorist bombing at Dhahran AB, Saudi Arabia. Wishing to avoid further negative opinion or influence from the presence of coalition forces, the GOSA moved coalition forces 80 kilometers south of Riyadh, to Prince Sultan AB (PSAB). Planners consolidated all coalition operations at PSAB to include the Combined Air Operations Center (CAOC). After the completion of major combat operations in Iraq in 2003, the GOSA denied further operations out of PSAB and coalition operations were forced to move to Al Udeid AB (AUAB), Qatar. This example showed the multiple negative effects stemming from choosing the wrong location for a fortified AB. While choosing the right location is critical to enhancing host nation relations and ensuring its willingness to accept the BPC efforts, it is also critical to have the host nation commit to providing a portion of the AB's integrated FP operations.

The next condition necessary to build the fortified AB is securing the host nation leadership's commitment to accept a portion of the FP responsibilities for the fortified

AB. As the Service Component Commander to a Joint Force Commander (JFC), the Commander of Air Force Forces (COMAFFOR) has “the responsibility to establish force protection and other local defense requirements…The COMAFFOR is responsible for overseeing the morale, welfare, safety, and security of assigned and attached forces.”[4] For the COMMAFOR to consider basing aircraft and personnel at an airfield, the location must be secure from attack in all domains. As the personnel and assets move closer to threats, the operations will require integrated FP measures. These measures must include host nation FP forces and resources. Host nation FP forces and resources are necessary to the multi-layered FP approach to secure that battlespace outside of the base boundary. This is why the host nation must commit to the FP operations or planners must reconsider building the fortified AB. After ensuring host nation commitment for BPC and FP efforts, planners must ensure that the host nation or surrounding region can provide the necessary logistics to support large-scale air operations.

There are multiple logistics requirements stemming from moving ISR and AR assets to a forward AB. First and foremost, is the additional fuel requirement necessary for the air campaign, especially during surge operations. During Operation Enduring Freedom (OEF), heavy aircraft at AUAB in Qatar used considerable stores of daily aviation fuel. Actual force numbers are classified, but the following assumptions demonstrate the magnitude of fuel requirements for the host nation and region. On average, there are at least 20 heavy (KC-135 or larger) aircraft operating daily. Each aircraft fully loaded carries 180,000 lbs of gas, thus requiring 3.6 million lbs of gas daily. Suppliers delivering this large amount of fuel to an easy-access location such as AUAB,

only requires docking a fuel ship in port and connecting to the fuel system for the peninsula. The suppliers then move the fuel, by truck, a short distance to the storage tanks at the AB. For a limited-access nation, the host nation must be certain it can provide the necessary fuel and robust transportation assets to transfer the fuel to the fortified AB. Having the necessary logistics to fuel the fight, along with host nation commitments are all great starts in evaluating the feasibility of the fortified AB philosophy shift, but all are irrelevant if the coalition cannot secure the fourth and final condition, air superiority.

One of the early pioneers of air doctrine, Giulio Douhet, stated "It is easier and more effective to destroy the enemy's aerial power by destroying his nests and eggs on the ground than to hunt his flying birds in the air."[5] Douhet fully understood the importance of protecting personnel and assets in all domains. Today's military leaders recognize that "successful military operations can be conducted only when they have gained the required level of control of the domains above the surface domains."[6] Air Superiority is "that degree of dominance in the air battle of one force over another which permits the conduct of operations by the former and its related land, sea, air, and special operations forces at a given time and place without prohibitive interference by the opposing force."[7] The only domain not protected by ground FP operations at the fortified AB is an attack from the air. Failure to maintain air superiority not only puts the AB in danger from airborne threats, but also puts the airborne assets in danger. Freedom to conduct land and naval operations is substantially enhanced when friendly forces are assured that the enemy cannot disrupt operations from above.[8] The ISR and AR assets recommended to relocate forward are LD-HD assets, so any security threat

that the integrated FP measures cannot mitigate will jeopardize the relocation of the LD-HD assets. While it is possible to provide protection from air attacks by using Air Defense systems such as the Patriot missile system; without air superiority, this AB filled with LD-HD assets becomes a tempting target for an enemy willing to take high risks to attack it from the air. By ensuring air superiority, this eliminates the possibility and temptation of the enemy's air forces to attack this valuable target. Although there are many conditions necessary to build the fortified AB, the many operational and strategic benefits will offset the cost of making the fortified AB philosophical shift.

Operational Benefits

Strategic planners must find more efficient and effective methods to conduct military operations. Building the fortified AB in the host nation will provide operational benefits in the following areas: drastically cutting billions of dollars in wasted transit costs; reducing unnecessary fatigue on aging US aircraft; decreasing the needless over-extension of the aircrew population and accompanying effects on force readiness; reducing the opportunities for remote attacks on deployed forces; and increasing responsiveness for alert aircraft to eliminate the need for an airborne fuel reserve.

To meet the BCA directed budget cuts, the US military must find more fiscally efficient methods to conduct increasingly expensive expeditionary warfare. Cutting wasted transit fuel costs associated with long-range air operations is one such method. Current methodology uses AR to conduct combat operations from distant and easily protected airfields. AR enables refuelable air assets to more rapidly reach any trouble spot around the world with less dependence on forward staging bases or overflight/landing clearances. AR significantly expands the options available to a

commander by increasing the range, payload, persistence, and flexibility of receiver aircraft.[9] While USAF doctrine professes that AR reduces the dependence on forward staging bases or overflight/landing clearances, this reduction in dependence on forward staging bases comes with a price. A price that in the past was dismissed as the “cost of doing business”, but in today’s fiscally constrained environment, this waste can no longer be dismissed by planners. Additionally, the dependence on the staging bases and associated overflight/landing clearance issues are eliminated by operating within the limited-access nation.

During OEF, long-range air operations flew from AUAB, Qatar to the middle of Afghanistan, which is approximately 1500 nautical miles (nm). The average transit time to Afghanistan is three hours each way. For the 20-30 sorties per day flying the extra 6 hours in transit time, the fuel costs accumulated quickly. For ease of understanding, values are approximate to illustrate the large amount of wasted fuel. As the normal planning factor, the average large aircraft, such as a KC-135 Stratotanker, RC-135 variant, or Airborne Warning and Control System (AWACS), burns 10,000 pounds (1470 gallons) per hour of flight. The average price for fuel over the past 10 years of OEF operations was $2.24 per gallon,[10] resulting in $3,300 in wasted jet fuel for every hour flown. Using the OEF example, each sortie wasted nearly $20,000 in transit costs from Qatar to Afghanistan. With an average of 20 sorties on the daily schedule, $400,000 was wasted in transit fuel costs each day. US aircraft have been operating out of Al Udeid AB or other air bases near Al Udeid in support of OEF since November 2001. The wasted transit fuel costs for heavy aircraft over the 10 years of OEF are conservatively estimated at $1.46 billion. The construction costs to build the Prince

Sultan AB complex totaled just over $1.07 billion, but included the construction of the Coalition Compound dormitories, associated morale, welfare and recreation facilities, and the Combined Air Operations Center.[11] The cost for only the runway and necessary operations facilities is estimated at $500 million. Over the past year, the cost of JP-8 aviation fuel rose from $2.34 to $3.95 per gallon and the cost continues to rise. Using the same calculations with the 2011 fuel price of $3.95 per gallon, each subsequent year will waste a minimum of $255 million. Using just the wasted transit costs for ISR and AR aircraft, the cost of building a new fortified AB in a limited-access nation such as Afghanistan would pay for itself in approximately two years.

In addition to cutting unnecessary transit fuel costs, the fortified AB will reduce the accumulation of unnecessary hours on the aging USAF aircraft fleet. Each of the C-135 variant aircraft was built between 1957 and 1963. The USAF has still not fielded a replacement for the KC-135 and the USAF estimates that these aircraft must last for at least another 15 years. The USAF will not receive the first 18 of the 175 KC-46A aircraft until 2017,[12] so extending the service life of the KC-135s is paramount. The 2011 USAF Almanac lists the average age of the KC-135 and RC-135 aircraft as 48.6 years and the E-3 (AWACS) as 30.8 years. As there are only 31 E-3 aircraft and 22 RC-135 reconnaissance aircraft,[13] both aircraft are designated as LD-HD assets and the US cannot afford to accumulate unnecessary hours on them. Adding unnecessary hours on these aging airframes creates an aircraft shortage for future air operations and increases the frequency of depot maintenance and down time. The average days in depot maintenance for KC-135s is 224 days,[14] so accelerating the maintenance requirement will strain the availability for these aircraft for future US combat operations.

The second order effect of this reduction in asset availability is the lost training opportunities for US receiver aircraft aircrews. Rarely will Combatant Commanders be denied requested AR support for theater combat operations. When the arsenal of available tankers is empty, the tanker unavailability affects training and readiness for receiver and tanker aircrews alike.

Along with the effects on receiver aircrew readiness, these unnecessary additional flight hours will also increase fatigue and decrease readiness of the overstretched tanker aircrews. Maximum Flying Time for aircrew members is defined as "56 hours flight time logged per 7 consecutive days, 125 hours flight time logged per 30 consecutive days and 330 hours per 90 consecutive days"[15] (approximately 110 hours per month). Using an average sortie duration of 8 hours per sortie, each crew member will reach his/her maximum flying hours after flying only 15 sorties per month. By adding 6 unnecessary hours to each sortie, each aircrew will fly at least 7 fewer sorties per month during each deployment, which equates to 14 fewer sorties per normal 76-day deployment. Aircrews already begin at a deficit for theater operations as they require 14 hours to fly into theater and must save 14 hours to fly the return leg. The flying hour restrictions coupled with the unnecessary hours flying from the safe ABs outside of the host nation will increase the necessary number of aircrews deployed to meet theater air operations requirements. These extra deployed crews will also have an effect on readiness by forcing aircrews to deploy more often and cut into the normal training and upgrade schedules for aircrew development.

Moving AR operations to the fortified AB in the host nation will also increase the responsiveness for alert AR aircraft, which will in turn reduce the need for an airborne

fuel reserve. During operations, air planners must ensure that in addition to normal AR taskings, the AR force is responsive to the fuel needs for Time Sensitive Targeting (TST) and Combat Search and Rescue (CSAR) operations. To meet these minimum notice fuel requirements, air planners use two types of contingency fuel. First, planners use alert tankers and crews to launch in minimum time to ensure the fuel arrives before the combat or CSAR assets run out of fuel. During long-range AR operations in Afghanistan, it took the alert tankers nearly 3.5 hours to arrive on station after notification. Tankers stationed in the host nation would cut a minimum of two hours out of the response time and increase the amount of fuel that the alert tanker can provide for the contingency operations.

The alternative to the alert tankers to meet minimum notice fuel requirement is the employment of a planned "airborne reserve." Planners and executors maintained a minimum of 200,000 pounds of airborne fuel reserve at any one time.[16] This method required one or multiple tanker aircraft to fly longer to ensure that fuel was available for any contingency. The closer proximity of the alert tankers reduces or eliminates the need for an "airborne reserve". This would also minimize the unnecessary fatigue on the aging aircraft and the additional hours logged by the aircrews, thus preserving LD-HD assets and reducing the number of aircrews required in theater. While there are many operational benefits for this philosophy shift, there also multiple strategic benefits stemming from building a quality and secure AB in the effected nation.

Strategic Benefits

While it is important to reap the benefits at the operational level, there are also equities to be gained in the strategic realm. Some of the strategic benefits include:

Building Partner Capacity (BPC) as the security responsibility will transition back to the host nation; sending a strategic communication message to the host nation showing US resolve for support to the host nation; reducing the diplomatic requirements for overflight and basing rights; and finally, mitigating the vulnerability to A2-AD efforts by US adversaries.

President Barak Obama stated in his 2010 National Security Strategy (NSS) that "We must invest in diplomacy and development capabilities and institutions in a way that complements and reinforces our global partners."[17] Strategic planners must consider this emphasis from the President on the importance of the US connection with current and future partners. As the US conducts BPC operations, one key element is increasing the security capability of the host nation where the US is conducting combat operations. Building this enduring and secure installation can be the cornerstone to building a nation's air capability.

> Development is a strategic, economic, and moral imperative. We are focusing on assisting developing countries and their people to manage security threats, reap the benefits of global economic expansion, and set in place accountable and democratic institutions that serve basic human needs. Through an aggressive and affirmative development agenda and commensurate resources, we can strengthen the regional partners we need to help us stop conflicts and counter global criminal networks.[18]

As previously discussed, US FP forces will work in concert with host nation FP forces to provide integrated FP operations as a necessary condition for building the fortified AB. Planners will also realize the strategic benefits of enhancing the capacity of the host nation FP planners and forces. Joint Doctrine states that "FP is multi-dimensional, providing multi-layered protection of forces and resources. It covers actions at home station, in transit, and at deployed locations. It includes not only

protecting military members and civilian employees, but also their families, contract employees, and visitors while on an installation."[19]

> In addition, a broad array of integrated functional expertise is necessary to facilitate a seamless FP posture. This functional expertise includes intelligence collection; awareness and reporting by all Airmen, on and off duty; detection of and protection from CBRN hazards, along with high yield explosives; physical security enhancements; armed defense; law enforcement liaison; and numerous other areas of expertise.[20]

This partnership will train the host nation security forces in FP planning and operations. Since the threats and hazards to operations can come from a wide range of sources, USAF FP planners must view FP in broader terms than other surface-oriented organizations. Threats to an active airfield may extend far beyond the surface area designated as a base boundary. To address these threats, the USAF uses a planning construct called the Base Security Zone (BSZ). Planners must consider and plan for those ground threats and hazards that could impact operations. The BSZ is defined as "the multi-dimensional space around the base from which the enemy might impact air operations by launching an attack against approaching or departing aircraft or personnel and resources located on the base is critical to air base defense planning."[21] Initially, US personnel will provide security to the negotiated base boundary—the area allocated to the base commander for protection and the host nation will provide security outside of the perimeter. Should the derived area extend beyond the base boundary into the BSZ, USAF security planners should coordinate with host nation security forces to ensure the protection of air resources. Figure 1 shows a depiction of the base boundary considerations.

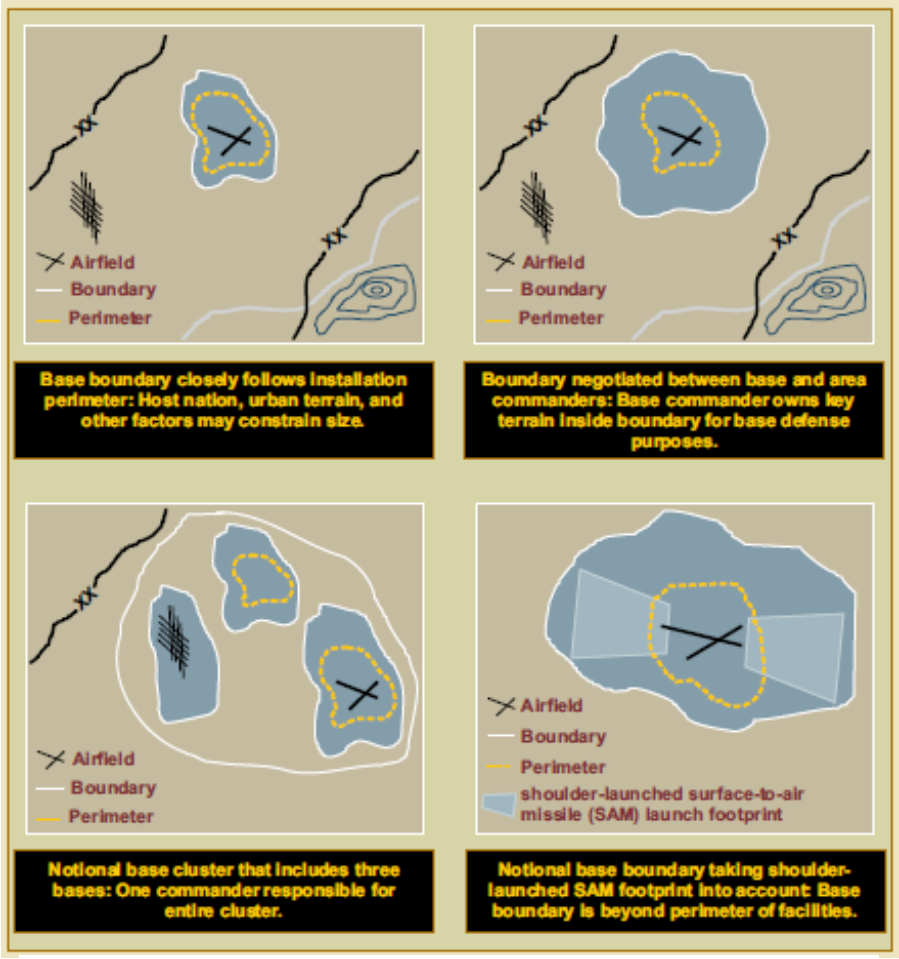

Figure 1. Base Boundary considerations

Along with the benefits of building a remote, fortified AB and training the host nation FP forces, moving large-scale air operations into the host nation will infuse large quantities of money into the local economy with the increased logistics support purchased from local businesses. This economic benefit falls in line with the President's guidance on development. As mentioned before, development is not just in the security arena, but also in the diplomatic and economic domains. In addition to the BCP benefits gained, building this fortified AB will also send a strong strategic message demonstrating US commitment to the host nation.

The 2010 NSS emphasizes the importance of strategic communications to ensure America's partners understand US national objectives and the Nation presents a consistent message.

> Across all of our efforts, effective strategic communications are essential to sustaining global legitimacy and supporting our policy aims. Aligning our actions with our words is a shared responsibility that must be fostered by a culture of communication throughout government. We must also be more effective in our deliberate communication and engagement and do a better job understanding the attitudes, opinions, grievances, and concerns of peoples—not just elites—around the world. Doing so allows us to convey credible, consistent messages and to develop effective plans, while better understanding how our actions will be perceived.[22]

The political message of US investment in the host nation's infrastructure and security forces ensures that the US strategic message about BPC and partnering with the host nation is both credible and consistent.

An additional strategic benefit is reducing the diplomatic requirements for overflight or basing rights in non-traditional partner nations. The only way to enable long-range AR and ISR operations is to have the necessary diplomatic clearances for overflight or basing rights. Overflight requirements necessitate the US State Department secure these vital overflight rights with each nation that air operations must fly over to conduct combat operations in the limited-access host nation. The disadvantage of this reliance on overflight rights is that planners are at the mercy of the nations owning the airspace above their sovereign territory. This disadvantage materialized in Operation Iraqi Freedom (OIF) with the challenges presented by the Turkish Government's decision to prohibit US forces from launching operations from Turkish soil during the initial phases of major combat operations in Iraq. During this denial, two Carrier Strike Groups in the Mediterranean moved through the Suez Canal to the Arabian Gulf to conduct operations due to the lost overflight rights. This vulnerability can make the

difference in future combat operations where the coalition may not possess overwhelming forces. Having the fortified AB in the nation where the coalition is conducting operations eliminates the challenges and continual vulnerability to overflight rights.

Another vulnerability for long-range air operations is the reliance on basing rights in a non-traditional partner nation. A non-traditional partner is one that is not an ally of the US, nor does the US have traditional bilateral relations. An example of this is Manas AB, Kyrgyzstan. In February 2009, the Parliament of Kyrgyzstan voted - by an overwhelming margin - to terminate the lease to the United States of Manas AB. This action would require the US to vacate the AB within six months. The vote followed an earlier announcement that Russia would provide over $2 billion in financial aid to Kyrgyzstan. Manas AB proved to be a critical AB for operations in and around Afghanistan, so it was in the US's best interest to secure its use. However, the cost of US access was $150 million dollars a year in aid to Kyrgyzstan. Strategic planners and senior leadership could avoid this non-traditional partner basing vulnerability by investing in the fortified AB in the host nation, such as Afghanistan.

Building a fortified AB in a limited-access nation located outside of populated cities has the strategic benefit of avoiding coalition influence on the local population and mitigates the risk of civilian casualties from enemy attacks on the AB within a populated city. In a nation where the ideology of the host nation and the coalition are contrasting, locating the fortified AB away from the populace avoids the possibility of strategic issues stemming from interaction with the local populace.

Additionally, the remote and fortified AB minimizes the risk to coalition personnel and assets stemming from the AB's close proximity to a populated city. City infrastructures provide the enemy concealment benefits from which to launch remote attacks that coalition FP measures cannot easily track or prevent. Moving air operations with the enticing LD-HD assets away from city centers also eliminates the enemy's temptation to attack the AB itself, along with the coalition aircraft in the departure or arrival modes of air operations. Remotely launched attacks happen routinely at airfields located near populated cities in Afghanistan and endanger personnel and aircraft, along with causing delays to critical air operations.[23] Furthermore, in the event that host nation personnel are killed by these remote attacks, these tactical or operational events will have strategic effects on operations and the theater.

The final strategic benefit to explore is reducing the coalition's vulnerability to the adversary's A2-AD efforts. Despite the high-level interest in anti-access and the term's increasing use in US defense policy documents, no official definition of either "anti-access" or an "anti-access strategy" exists.[24] Anti-access measures are:

> … any action by an opponent that has the effect of slowing the deployment of friendly forces into a theater, preventing them from operating from certain locations within that theater, or causing them to operate from distances farther from the locus of conflict than they would normally prefer….Anti-access measures include attacks on airfields, which could force aircraft to operate from more-remote airfields or could prevent additional forces from being flown into the theater; attacks on seaports, which could prevent additional forces from being brought into the theater through these ports; and attacks on aircraft.[25]

There is no doubt that any enemy capable of denying access to close-range ABs; preventing aircraft from flying into theater due to a lack of usable ABs; or attacking aircraft in transit to combat operations would certainly do so to disrupt air support for

combat ground forces. Moving air operations within the host nation would negate these A2-AD effects. Reacting to an adversary's A2-AD efforts is ineffective compared to eliminating them by building that fortified AB in the limited-access nation.

The Ideal Fortified Air Base in a Limited-Access Nation

After exploring the many fiscal, operational and strategic benefits of the fortified AB philosophy shift, it is practical to shift the discussion to define the characteristics of the model fortified AB. Certainly, it is important to first meet the mandatory conditions of gaining host nation support for presence and FP operations, ensuring regional logistics capabilities and guaranteeing air superiority. Once these conditions are met, the next step is selecting the ideal location for the AB. The ideal location is centrally located in the nation of operations and approximately 40-60 miles from a major city to eliminate the city environment concealment benefits to the enemy, along with avoiding confrontations and cultural influence on the local populace, but must be close enough to a large city to exploit the logistical support and lines of communication available in the city. Since a robust runway is critical to effective air operations, the standards used for a US bomber base is an ideal AB model. This model AB must have multiple ramps for dispersal of dissimilar missions and at least one large ramp for large-scale air and cargo operations. As discussed, large aircraft use great quantities of fuel and the most efficient way to deliver fuel to these large aircraft is building an efficient hydrant connected fuel system into the tarmac. This efficient hydrant system eliminates the need for a large fuel truck fleet and associated personnel and costs. As planners design this airfield, it is imperative to develop the associated infrastructure necessary to support this runway and ramp. This includes an air traffic control tower, base

operations, hangers and other base infrastructure. Vital to this construction is the inclusion of FP planners in the AB's design phase to ensure the Base Security Zone is sufficient to provide protection to coalition personnel and assets, along with aircraft arrival and departure corridors. Involving the host nation in the FP design is critical for ensuring the integrated plan is feasible for host nation FP forces and for developing the host nation's FP planning capacity by properly training host nation FP planners. This joint development ensures a positive relationship with the host nation and provides a capable host FP force for the eventual transfer of security responsibilities to the host nation.

Conclusion

In an effort to follow the President's new defense strategic guidance to find more efficient and fiscally responsible methods to conduct military operations, planners must consider the many operational and strategic benefits of building a fortified AB in a limited-access nation to conduct combat, ISR and AR operations. The discussion began by outlining the necessary conditions to build this beneficial fortified AB. Once those conditions are met, it was prudent to identify the fiscal and operational benefits from moving ISR and AR operations within the nation where the coalition is conducting combat operations. The operational benefits will save billions of dollars in wasted transit costs, reduce the fatigue on an aging aircraft fleet and an over-stretched aircrew force, and enhance FP operations by mitigating the opportunities for attacks on deployed forces and assets. Additionally, relocating these operations will increase the responsiveness of alert aircraft, eliminating the requirement for wasteful and inefficient airborne fuel reserves. Along with the many operational benefits, the discussion

highlighted the multiple strategic benefits of shifting ISR and AR operations to the fortified AB philosophy. Building the right AB in the right location at the right time will enhance BPC efforts with a quality AB and trained FP forces as the security responsibility transitions to a more capable host nation. Additionally, this quality AB will deliver a consistent strategic communication message to the host nation demonstrating the US resolve for the success of the host nation's security. Furthermore, the fortified AB will reduce the diplomatic dependency on overflight and basing rights, and reduce the coalition's operational vulnerability to A2-AD efforts of adversaries. After highlighting the many operational and strategic benefits of the fortified AB philosophy, it was prudent to define the characteristics of that ideal fortified AB. As the Department of Defense must operate in a new fiscally constrained environment and still meet security challenges by conducting combat operations in limited-access nations, this philosophy shift for committing early to building the fortified AB in that limited-access nation becomes increasingly necessary. Senior leadership and strategic planners must commit to this concept as soon as the defined necessary conditions exist to invest the money saved in wasted transit costs to build the fortified AB, infrastructure and FP systems. As the new strategic environment mandates innovative solutions to counter A2-AD efforts, geographic challenges and an increasingly uncertain diplomatic arena, this philosophy shift provides planners a fiscally sound alternative. With the many operational and strategic benefits of this new concept, future strategic planners now have the justification to exploit these benefits to build a fortified airbase in a limited-access nation.

Endnotes

[1] Air Force Doctrine Document (AFDD) 3-17, *Air Mobility Operations*, 1 March 2006, 56.

[2] Catherine Dale and Pat Towell, *In Brief: Assessing DOD's New Strategic Guidance,* Congressional Research Service, 12 Jan 12, 3.

[3] Ibid.

[4] AFDD 1, *Air Force Basic Doctrine, Organization, and Command*, 14 October 2011, 58.

[5] AFDD 3-10, *Force Protection*, 28 July 2011, 13.

[6] AFDD 1, *Air Force Basic Doctrine, Organization, and Command*, 14 October 2011, 17.

[7] Ibid., 45.

[8] Ibid., 17.

[9] Ibid., 50-51.

[10] Average fuel prices from DLA Energy website under "Standard Prices" - used standard prices for 2002 through 2011, http://www.desc.dla.mil/DCM/DCMPage.asp?PageID=722 (accessed 1 Feb 2012).

[11] Cost outlined in the GlobalSecurity.org facilities listing for Prince Sultan AB, Saudi Arabia, http://www.globalsecurity.org/military/facility/prince-sultan.htm (accessed 24 Feb 12).

[12] Amy Butler, "USAF Official Dispels Restructuring of KC-46A", Aviation Week, http://www.aviationweek.com/aw/generic/story_generic.jsp?channel=defense&id=news/asd/2012/02/15/02.xml&headline=USAF%20Official%20Dispels%20Restructuring%20Of%20KC-46A (accessed 24 Feb 12).

[13] Data from the 2011 Air Force Magazine, http://www.airforce-magazine.com/MagazineArchive/Magazine%20Documents/2011/May%202011/0511facts_figs.pdf (accessed 1 Feb 12).

[14] Ralph Monson, "AFMC air logistics center marks KC-135 maintenance milestone", http://www.afmc.af.mil/news/story.asp?id=123225016 (accessed 1 Feb 12).

[15] Air Force Instruction 11-202, Volume 3, *General Flight Rules*, paragraph 9.6.

[16] Author's personal experience serving as the Chief, Air Refueling Control Team, Combined Air Operations Center, Prince Sultan Air Base, Saudi Arabia for Operation Enduring Freedom, February 2002-May 2002.

[17] President Barak Obama, *National Security Strategy*, May 2010, 14.

[18] Ibid., 13.

[19] JP 1, *Doctrine for the Armed Forces of the United States*, establishes the responsibilities of geographic combatant commanders for force protection. See Chapter 2 for a more detailed discussion of command relationships as they affect FP.

[20] AFDD 3-40, *Counter-Chemical, Biological, Radiological, and Nuclear Operations*.

[21] AFPD 31-1, *Integrated Defense*, for information that establishes the BSZ as an Air Force construct.

[22] President Barak Obama, *National Security Strategy*, May 2010, 16.

[23] During the author's time as a commander (2008-2011), weekly intelligence briefs would brief the attacks on locations where base personnel were deployed. While the number of attacks per week is classified, the attacks were frequent enough to be briefed weekly.

[24] Roger Cliff, Mark Burles, Michael S. Chase, Derek Eaton, Kevin L. Pollpeter; *Entering the Dragon's Lair: The Implications of Chinese Antiaccess Strategies,* RAND Corporation, Santa Monica, CA, 2007, 11.

[25] Ibid.